



Montgomery County Fire and Rescue Service

Post Incident Analysis

Fatal Building Fire
415 Silver Spring Ave.
Silver Spring, MD

Incident Date: April 2, 2013
Incident # 13-0035730



Submitted by Battalion Chief David Polikoff

2013 Post Incident Analysis- 415 Silver Spring Ave- 4-2-2013

Incident Overview

This Post Incident Analysis (PIA) is based on PIA fact sheets, interviews and the incident audio recordings.

On April 2, 2013 at 0655 hrs MCFRS units were dispatched and responded to a reported high-rise building fire at the Montgomery Towers located at 415 Silver Spring Avenue in Silver Spring, MD. Weather conditions were clear, sunny, and cool, the temperature was 50 degrees Fahrenheit with low humidity with the wind blowing about two miles per hour from the north.

While units were en route to the call, the Emergency Communication Center advised of possible persons trapped in Apartment 604. Paramedic Engine 701 arrived on the scene with a six story high-rise with fire showing from the top floor on Side Alpha of the building. A Rapid Intervention Dispatch was dispatched and Battalion Chief 701 requested a Fire Task Force and a second alarm.

Paramedic Engine 701 and Engine 702 each advanced a hand line from the standpipe in stairwell #1 (see diagram below) to the fire in Apartment 603. Both crews worked together to extinguish the fire. A total of ten rescues were made, both from balconies via ladders and from the interior. Ten residents were treated by fire/rescue personnel. Six of the ten were transported with one succumbing to his injuries.

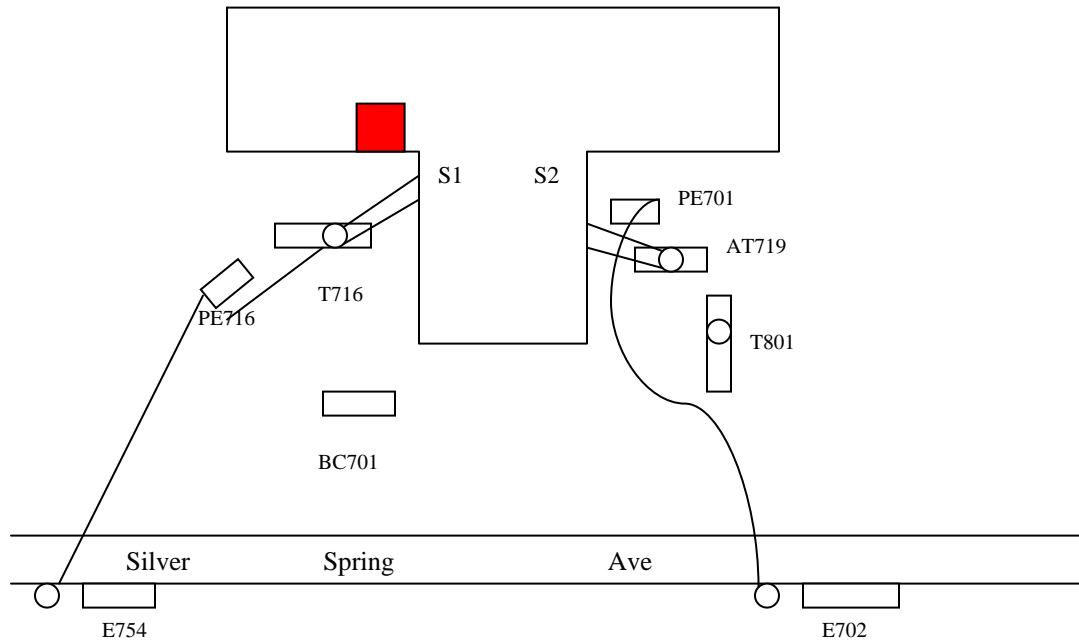
The resident who succumbed to his injuries was found in the common hallway outside of the fire apartment and was burned over 80% of his body. Two elderly females who were rescued off their balcony had tried to pull the resident to safety but were unable to due to his weight and their age.

The entire building was evacuated and 39 residents were sheltered in two Ride-On buses.

An origin and cause investigation was conducted by MCFRS Fire and Explosive Investigations. The cause of the fire was ruled accidental.

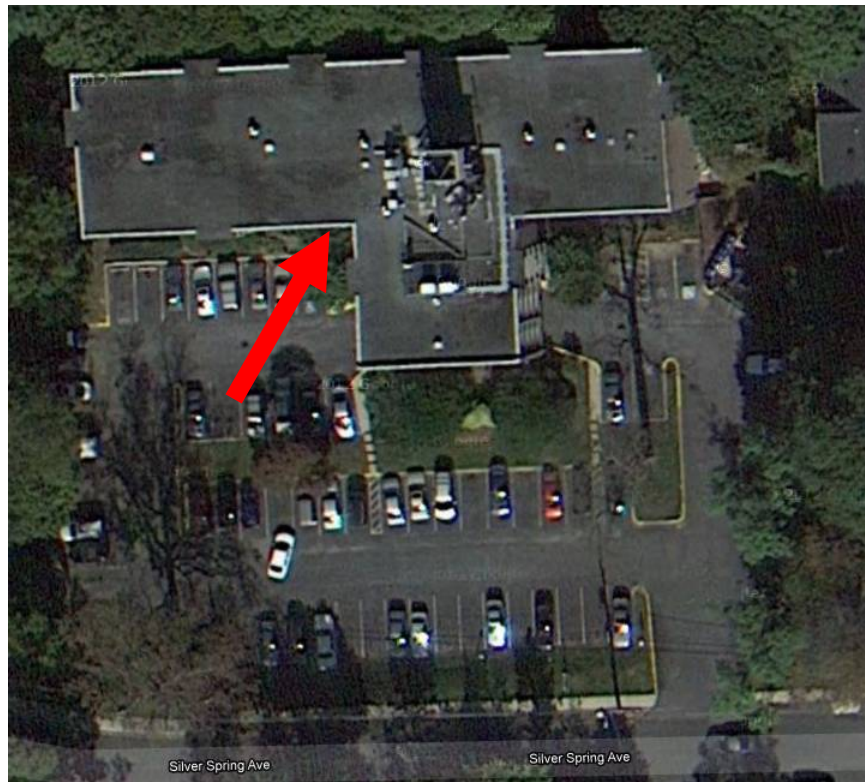
Damage to the building was extensive, with the fire apartment 100% involved and with fire having vented to the exterior. Further thermal and smoke damage was sustained to the common hallway as crews entered the apartment. The total dollar loss for the structure and the contents was \$400,000.00.

Diagram of the building and apparatus positioning



Structure/Site Layout

- The structure at 415 Silver Spring Avenue is a six story "T" shaped residential high-rise. The building was built in 1961 and contains 61 residential rental units.
- The building sits on a 1.5 acre lot. The total building size is 67,728 square feet
- The unit involved was one bedroom with a full kitchen, dining area, a full bath and a living room.
- The apartment involved was situated in the middle of the hallway. This made evacuating adjoining apartments impossible due to the intensity of the fire, thus leading to many rescues.
- The roof was tar and gravel over fiberboard that was laid on steel bar joist.
- This structure was built without sprinklers and was never retrofitted.
- A standpipe system was located in stairway #1.
- There was no vehicle or aerial access to Side Charlie due to the building having been built on a slope. This access issue complicated fire fighting operations, limiting entry of personnel and resources to only three sides. Residents encountered similar issues with only being able to egress from the building on three sides.
- Smoke detectors were present in all units. The smoke detector in the fire apartment alerted the neighbors in Apartment 604.
- The building was protected by a local alarm that was used to alert occupants but did not contact an alarm company. It was noted that the alarm was not very loud when the alarm was pulled.
- There were no issues gaining entry to the building or the fire apartment.



Arrow points to location of the fire apartment on the top floor



Side Alpha view arrow shows location of the fire apartment

The following pictures show conditions on arrival through extinguishment:





Fire Code History

- At the time of the fire there were no known code compliance issues.

Communications

- There were no communication issues during the incident.
- The Vehicle Repeater System (VRS) was activated once Battalion Chief 701 arrived on the scene and the activation was announced on talk group 7 Charlie.
- 7 Delta was used to communicate with all second alarm units.
- The Public Safety Communications Center (PSCC) advised responding units that there was a report of people trapped in Apartment 604.
- All units operating on the fire used great radio discipline. Units limited their radio reports to important information. Units communicated information through their respective Division/Group Leaders. These actions greatly reduced radio traffic.
- PSCC was updated at 20 minute intervals, when the fire was knocked, and when the incident transformed into a Mass Casualty Incident (MCI). This prompted the PSCC to make the appropriate transfers to empty stations which shortened response times for subsequent units.
- All mutual aid companies utilized the correct radios and talk groups.

Pre-Emergency Planning

- A box map of the building was available to all responding first alarm units.
- The map was two years old and assisted the incoming companies by showing which stairwell had a standpipe system and which stairwell had roof access.

On Scene Operations

- Paramedic Engine 701 arrived on the scene and stated that they had a six story apartment building with fire showing from the top floor. The officer of Paramedic Engine 701 established command in the “attack mode”.
- Paramedic Engine 701 secured a water supply, took a position on Side Alpha and charged the standpipe connection.
- Paramedic Engine 701 advanced to the sixth floor via the stairway with standpipe packs. Paramedic Engine 701 noted smoke in the hallway but no fire. They opened the door and began attacking the fire in Apartment 603.
- Engine 702 completed their part of the water supply for Paramedic Engine 701 and proceeded to the sixth floor via the stairway with standpipe packs. Engine 702 assisted Paramedic Engine 701 with line advancement and then backed them up with a second line.
- Paramedic Engine 719 arrived on the scene, proceeded to the fifth floor with their standpipe packs and became the Rapid Intervention Company (RIC)
- Paramedic Engine 716 laid an additional supply line and positioned on Side Alpha opposite of Paramedic Engine 701 (see diagram on page 3). This allowed all of Side Alpha to be covered by fire rescue personnel.
- Paramedic Engine 716 proceeded to the sixth floor with standpipe packs to check for horizontal fire spread in Apartment 604 (to the right of the fire apartment). While searching in moderate smoke conditions, they found a mother and her child who were trapped in the apartment. Because of increasing heat and smoke in the hallway, the officer of Paramedic Engine 716 made the decision to move the trapped occupants to the balcony. The officer lowered his personal rope to his driver and hoisted up an oxygen bag. The crew then rendered aid and sheltered in place until conditions cleared in the hallway. They then removed the mother and child to the ground floor and transferred them to a transport unit for continued treatment.
- Engine 754 completed Paramedic Engine 716’s water supply. Their crew was instructed to go to the sixth floor and check for horizontal fire spread in the apartments to the left of the fire apartment.
- Truck 716 arrived ahead of Aerial Tower 719 and assumed the duties of the first due truck and positioned on Side Alpha opposite of Paramedic Engine 701 (see diagram on page 3).
- Truck 716 had five personnel because of early arriving personnel at the station and split into two crews. One crew made two rescues from the balcony of Apartment 601 via the aerial.
- The other crew from Truck 716 moved through Apartment 601 and into the hallway of the sixth floor where they located the occupant of the fire apartment who had been seriously burned. They removed him to the balcony and lowered him down using Truck 716’s aerial. Medic 701 was alerted via radio to move to the base of Truck 716 to receive the burned patient.

- Aerial Tower 719 arrived on the scene and took a position on Side Alpha to the rear of Paramedic Engine 701 (see diagram on page 3). They laddered the sixth floor and removed four occupants from a balcony.
- Aerial Tower 719's crew ascended their tower to the sixth floor to assist with search and overhaul.
- Battalion Chief 701 arrived on the scene and alerted Paramedic Engine 701 that he would assume command. Paramedic Engine 701 was given the assignment of Division Six.
- Battalion Chief 702 arrived on the scene and assisted with building out the command team. Battalion Chief 702 quickly arranged all incoming units on the command chart and assisted with disseminating various tasks on the fire ground.
- Rescue Squad 742 was dispatched on the first alarm, but failed to respond. Rescue Squad 814 was dispatched as a replacement.
- Rescue Squad 741 Bravo was dispatched on the Rapid Intervention Dispatch (RID). Because Rescue Squad 741 Bravo arrived before Rescue Squad 814, Command made the decision to assign Rescue Squad 741 Bravo as the Search Group and Rescue Squad 814 to the Rapid Intervention Group (RIG). This allowed a Rescue Squad to move into the building and ensure all searches were completed.
- Truck 801 went to the top floor, opened the roof hatch and gave a report from the roof. They then assisted with overhaul.
- The fire was extinguished quickly and the focus shifted from fire attack to mass care mode due to the amount of injured occupants.
- Command quickly set up a patient collection point to the rear of Paramedic Engine 716 and assigned Ambulance 701 to the Emergency Medical Services Group Supervisor.
- Command called for two more medic units and one ambulance. Command assigned Paramedic Engine 707 to the EMS Group to assist with triage and treatment. Ultimately, the Emergency Medical Service Duty Officer (EMS700) took control of the EMS group and coordinated patient movement and transport.

Command Functions

The incident was broken into the following Groups/Divisions:

- Division Six
- Search and Rescue
- Rapid Intervention Group
- Rehabilitation
- Emergency Medical Services
- Humanitarian Efforts

Staging

Staging was set up on Silver Spring Avenue at the intersection of Piney Branch Road. All task force and second alarm units were instructed to stage and remain on talk group 7 Delta.

Support Functions

- Command Post 727 set up near the Command Post to support Command. The Operations Chief and the Duty Operations Chief moved to Command Post 727 to work on the humanitarian aspect of the incident.
- Canteens 705 and 740 set up on opposite ends of the incident. This allowed the feeding of fire and rescue personnel at one canteen and civilians at the other.
- Air 716 filled all the Self Contained Breathing Apparatus (SCBA) cylinders to allow units to continue with the fire fighting effort.
- Fire Explosive Investigations gathered evidence about the fire.
- Potomac Electric Power Company (PEPCO) secured the electricity in the building by shutting it down.
- Washington Gas Light stood by but was not used.
- Red Cross assisted displaced residents with lodging.
- Code Compliance looked over the alarm system and the emergency lighting system.

Medical Group Development

The incident required a medical component for occupants who had been in the building at the time of the fire. Many occupants of the sixth floor were exposed to heat and smoke during their evacuation or rescue.

Displaced occupants from the building spilled into the small parking area at the front of the building. As occupants exited out the front doors, they required attention from the fire crews who were already engaged in the rescue efforts of upper floor residents and fire suppression activities.

The immediate need of the residents tasked all initial EMS resources. The driver of Paramedic Engine 716 started the process by “corralling” residents as they left the building and beginning the triage process while performing his primary duty as driver of Paramedic Engine 716.

Command requested additional transport units and assigned Paramedic Engine 707 to coordinate the patient care management. The EMS Group completed the tasks of triage, treatment, and the transport of six patients to area hospitals.

Members of the EMS Group documented medical information for each patient while continuing to manage the resources and processes assigned to the group. A single point of contact provided a situational update via radio to each of the hospitals.

Sheltering at the scene

A visual assessment of the crowd revealed that the residents were dressed in pajamas or sleeping attire and thus not prepared for the cool temperatures of the early morning. Complicating the scene was the physical restriction of the small parking lot, which was quickly filling with firefighting personnel, apparatus and tools.

Neighbors of the apartment building ventured out of their homes to bring people inside and offered water and food to the residents standing on the street. The arrival of the Ride-On buses provided the MCFRS a smooth transition to shelter, transitioning the chaotic street scene into a more controlled area which provided stability to the residents.

Utilizing relationships to expand the sheltering process

The command team called for two buses from the Ride-On system early in the incident to shelter the residents from the cold. Each bus reported to the scene and positioned at the edge of the property on Silver Spring Avenue. The crew from Truck 855 assisted with the coordination of vehicles on the fire ground and directing the residents to the correct location.

These resources provided a safe and secure environment to get residents out of the elements, shelter them from the event and enhanced the ability to provide them with information.

Expanding the Command Platform

The second alarm automatically includes the dispatch of Command Post 727 from the Public Safety Training Academy (PSTA). Staffed with a single PSTA driver, this resource arrived in a timely manner providing a solid platform for the senior staff to transition into larger providing more efficient space to direct resetting the community.

The Operations Division Chief and Duty Operations Chief moved to Command Post 727 allowing the Command team to focus on the immediate operational needs of the incident.

In Command Post 727, members of the building maintenance staff, the building manager and the complex manger assembled to review the current situation. In collaboration with representatives from PEPCO, Washington Gas and Light, and Washington Suburban Sanitary Commission, these personnel met and quickly developed a plan of action with tasks, milestones and updates to meet the needs of the residents.

The Public Information Officer (PIO) arrived on the scene to coordinate social media updates and live news coverage interviews.

Community engagement

Community engagement was enhanced by the arrival of members from the Silver Spring Regional Service Center to assist with coordination of community groups helping the displaced residents. This strong action by the local neighborhood residents and officials demonstrates the effectiveness of these types of agencies.

Past work done by the community with MCFRS involvement has prompted keen awareness of public safety issues. The network of social media in this area is high which contributes to this level of awareness.

Building the sheltering components

Red Cross arrived on the scene with three representatives to assist with sheltering and food needs. Assigning those tasks to the Red Cross staff continued the transition of the incident back to the community.

Working with the firefighting command team, the Red Cross members connected with the residents in securing personal items, medications and clothes. With no electricity, and hose lines throughout the building, residents couldn't be allowed in building without assistance. Firefighters escorted residents back to their units, providing light and assisting with access.

Anticipating the needs of the residents, a Montgomery County Government Health and Human Services Public Health official authorized temporary shelter at the Gilcrest Center and coordinated transportation to the facility. This facility is in close proximity to the fire building and the staff and resources were prepared to meet the need of the residents. The shelter did not receive the utilization expected with only one resident reporting to the shelter.

Safety

- Multiple crews arrived on the scene nearly at the same time. Paramedic Engine 719 went to floor number five and became the Rapid Intervention Company. The Rapid Intervention Group was filled out with Rescue Squad 814, Truck 706 and Medic 701 (Medic 701 was redirected to patient care).
- A Personnel Accountability Report was performed at the 20 minute mark.
- One firefighter sustained a cut hand from broken glass that cut through his leather glove.
- An Incident Scene Safety Officer was established using Safety 700.

Investigation

- Due to extensive fire damage it was difficult to pinpoint where the fire started or the cause of it. The entire contents of the apartment were almost entirely burned. The Fire and Explosive Investigator determined that the fire was accidental and the case was closed.



Interior view of the fire apartment



View from the sixth floor hallway. Arrow shows the door to the fire apartment. Note the signs of high heat that was encountered by the first in crews.



View of the fire apartment door frame. The wall separating the fire apartment and the common hallway was 3 sheets of drywall. There were no studs or frame work holding up the entire length of the wall.

Lessons Learned

- The first arriving engine officer from Paramedic Engine 701 provided a very good on scene report. This allowed the responding Battalion Chief to call for more resources quickly.
- Crews worked together to get the first line in place which allowed for rapid fire extinguishment.
- Crews encountered a frozen standpipe riser wheel. By having hand tools with them they were able to free the wheel and get water to the first line.
- Effective radio communications occurred between crews and command.
- Utilization of a Paramedic Engine as part of the EMS assisted with extra hands for many patients and also brought an additional paramedic to assist with critical patients.
- Too many hose lines going through one door can slow down hose advancement.
- Paramedic Engine 716 had a 4" supply line laid to the base of Truck 716 as plan "B" if the interior crews could not make the fire apartment due to excessive heat. The ladder pipe on Truck 716 could have knocked the fire from the exterior windows and then allowed the interior crews to continue their advancement.
- Having two command officers in the Command Post assisted in managing incident priorities.

- Establishing a patient collection point for all injured occupants allowed the EMS Group to mitigate a rapidly growing Mass Casualty Incident.
- Battalion Chief 702 established a Humanitarian Group to help steer evacuating occupants away from the scene. This task was taken over by the Duty Operations Chief and the Operations Division Chief, allowing Command to concentrate on the fire and patient care.
- Having the Duty Operations Chief and the Operations Division Chief move to Command Post 727 to run the logistics and the humanitarian response aided the initial Incident Commander in remaining focused on fire and rescue tasks.
- When sheltering displaced residents, consider having Fire Rescue or Police personnel conduct a resident sign in and sign out process

Units on the 1st alarm

Paramedic Engine 701
Engine 702
Paramedic Engine 719
Paramedic Engine 716
Engine 754

Aerial Tower 719
Truck 716
Truck 801
Rescue Squad 742 (failed to respond)
Rescue Squad 814

Ambulance 701
Battalion Chief 701
Battalion Chief 702

Safety 700
Duty Operations Chief 700
Operations Division Chief 700

Units on the Rapid Intervention Dispatch

Rescue Squad 741 Bravo

Truck 706

Medic 701

Units on the Task Force

Paramedic Engine 712

Aerial Tower 718

Engine 812

Units on the 2nd alarm

Paramedic Engine 707
Engine 844
Engine 705 Bravo
Paramedic Engine 706

Truck 812
Truck 855

Medic 742 Bravo

Canteen 705
Canteen 740
Air Unit 716

Conclusion

This incident could have had a worse outcome than it did, but because of four person staffing, more boots were on the fire ground to cover many critical tasks immediately. Because many of the personnel were familiar with the structure and maintained task discipline, the incident was handled quickly.

Command was able to build out the command team with the second Battalion Chief and focus on all aspects of this rapidly evolving incident.

Crews followed the standard operating procedures, took their assigned positions, established water supplies and moved aggressively on a rapidly expanding fire.

A total of ten rescues were made quickly.

The fire event quickly expanded into an Emergency Medical Services mass casualty incident. Crews followed the standard operating procedures moving seamlessly between fire suppression into triage, treatment for those occupants in need of Emergency Medical Services care and transport to the appropriate medical facility.

Crews followed the triage benchmarks and quickly set up triage, treatment and transport areas.

This fire resulted in a fatality of an elderly person. Senior citizens are in a high risk population for fire deaths in Montgomery County Maryland. Additional actions after this fire included a review of the Montgomery County Senior Life Safety Panel Initiatives by the personnel at Fire Stations 1 and 2.

“After the fire” activities were completed in the surrounding neighborhoods on the evening of the fire to heighten awareness of smoke detectors, test those units and emphasize the importance of an in home fire escape plan.

This action was completed going door to door using the Safety In Our Neighborhood (SION) documents and service.